

RECENT PAPERS BEARING ON METEOROLOGY

The following titles have been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers and other communications bearing on meteorology and cognate branches of science. This is not a complete index of all the journals from which it has been compiled. It shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau.

American meteorological society. Bulletin. Worcester, Mass. v. 8. 1927.

Brooks, C. F. "The glacial anticyclone": a review. p. 16-17. (Jan.) [Abstract.]

Ekblaw, W. Elmer. Local character of Greenland climatic data. p. 15-16. (Jan.) [Abstract.]

Ferguson, S. P. The meteorological results of the first Greenland expedition of the University of Michigan. p. 13-14. (Jan.) [Abstract.]

Henry, Alfred J. The Brückner cycle in the United States. p. 17-19. (Jan.) [Abstract.]

Hobbs, William H. The first Greenland expedition of the University of Michigan. p. 11-13. (Jan.) [Abstract.]

Alexander, William H. Ohio weather and the sugar beet. p. 50. (March.) [Abstract.]

Alter, Dinsmore. A study of the possibility of economic values in statistical investigations of rainfall periodicities. p. 45-46. (March.) [Abstract.]

Devereaux, W. C. The thunderstorms at Cincinnati. p. 49-50. (March.) [Abstract.]

Gregg, W. R. Meteorological service for commercial aviation—recent developments in the United States. p. 48-49. (March.) [Abstract.]

Humphreys, W. J. The tornado. p. 46-48. (March.) [Abstract.]

Increasing snow removal from country highways. p. 55-56. (March.)

The pampero at sea. p. 52-53. (March.) [Transl. from Larisch-Moennich, "Sturmsee und Brandung."]

Reichelderfer, F. W. A new set of tables for determining true wind from apparent wind aboard a moving vessel. p. 48. (March.) [Abstract.]

Annalen der Hydrographie und maritimen Meteorologie. Berlin. 54. Jahrgang. 1926.

Burghardt, Gotthard. Die Wettersicherung beim Seeflugwettbewerb. p. 408-413. (November.)

Peppler, W. Der Einfluss von Wasserflächen auf die Cumulusbildung. p. 399-401. (November.)

Schopper, H. Sind die Nebelsignale verbessерungsbedürftig? p. 407-408. (November.)

Groissmayr, Fritz. Der thermische Effekt der Zirkulation über dem Kuro-Shio. p. 432-437. (Dezember.)

Astronomie. Paris. 41 année. Mars 1927.

Besson, L. Les mouvements atmosphériques ascendants. p. 130-132.

Jelstrup, Hans S. Le sifflement de l'aurore polaire. Note concernant l'aurore du 15 octobre 1926, observée en Norvège. p. 128-129.

Aviation. New York. v. 22. 1927.

McAdie, Alexander. The fliers' aspects of aerography. The Shenandoah and the squall. p. 215-216. (Jan. 31.)

Ground signaling on imperial airways route. p. 277. (Feb. 7.)

Allen, Edmund T. Night flying in bad weather. p. 461-463. (March 7.)

Beiträge zur Geophysik. Leipzig. 15 Band, 4 Heft. 1926.

Hopfner, F. Mathematische Grundlagen zu einer astronomischen Theorie der Klimaschwankungen. IV: Die Jahreszeitliche Einstrahlung in einem Ebenenbündel zweiter Art. p. 354-375.

Kalitin, N. N. Die Durchsichtigkeit der Erdatmosphäre nach Beobachtungen in Pawlowsk. p. 376-400.

Wassiliew, K. N. Zur Frage der theoretischen Bestimmung der vertikalen Strömungen in der freien Atmosphäre. p. 412-436.

California citograph. Los Angeles. v. 12. 1927.

Ellison, Eckley S. High winds and citrus damage in December, 1926. p. 124; 148. (February.)

Sederholm, E. T. Thermometer for checking temperatures in citrus groves. p. 180.

Discovery. London. v. 8. March, 1927.

Kerr, H. Rait. Cloud photography for amateurs. p. 75-77.

Engineering news-record. New York. v. 98. 1927.

Lorange, R. Fighting snow on a mountain railway in Norway. p. 318-321. (Feb. 24.)

Mysteries of the air. p. 347. (March 3.) [Editorial expressing a pessimistic view of the progress of meteorology.] Iowa flood of cloudburst type damaged river structures. p. 405-406. (March 10.)

France, Académie des sciences. *Comptes rendus. Paris. t. 184. 1927.*

Bureau, R., Vaut, A., & Gret, A. Un enregistreur de la fréquence des atmosphériques; son utilisation en météorologie. p. 157-158. (17 janv.)

Jelstrup, Hans. Sur un phénomène sonore perçu pendant une aurore polaire très intense. p. 159-160. (17 janv.)

Devaux, Joseph. Sur l'existence et la localisation de courants d'air verticaux aux environs du sommet du Pic du Midi; leur utilisation par les vautours. p. 295-297. (31 janv.)

Besson, [Louis]. Observations comparatives de la radiation lumineuse au bord de la mer et à l'intérieur des terres. p. 386-389. (14 févr.)

Géographie. Paris. t. 46. Novembre-décembre 1926.

Wattier. Eau, neige et glace dans le massif du Goundafi. p. 344-350.

Japanese journal of astronomy and geophysics. Transactions and abstracts. Tokyo. v. 4. no. 1. 1926.

Terada, Torahiko, & Yamaguti, Seiti. On the effects of winds on sea-level. p. 35-54.

Journal de physique et le radium. Paris. t. 8. Janvier 1927.

Gallissot, Ch. & Bellemin, E. L'observation des accidents optiques de l'atmosphère. L'altitude des stries, signe précurseur du temps. p. 29-50.

Journal of geophysics and meteorology. Moscow. v. 3. no. 3-4. 1926.

Batyghina, A. I. The transparency of the atmosphere in Sloutzk (Pavlovsk) for 1923, 1924 and the first six months of 1925. p. 158. [Russian, with English abstract.]

Obolensky, V. N. Effect of arborous vegetation on the temperature of the soil and the temperature and humidity of the air. p. 138-139. [Russian, with English abstract.]

Tverskoy, P. N. L'émanation radioactive auprès de la surface du sol. p. 206. [Russian, with French abstract.]

Wangenheim, A. Th. Conditions synoptiques de l'inondation à Leningrad du 23 septembre 1924. p. 194-195. [Russian, with French abstract.]

Wiese, W. Beiträge zur Vorhersage der mittleren monatlichen und jahreszeitlichen Werte meteorologischer Elemente. p. 178-179; [Russian, with German abstract.]

Marine observer. London. v. 4. April, 1927.

Garbett, L. G. Upper air observations over the sea. p. 79-81.

Matériaux pour l'étude des calamités. Genève. Année 3. Juillet-septembre, 1926.

Mougin, P. Le danger des glaciers et des inondations en Savoie. p. 141-157.

Meteorological magazine. London. v. 61. February, 1927.

[Brooks], C. E. P. Abnormal rainfalls. p. 1-5.

Dight, F. H. The significance of mean cloudiness. p. 6-10.

Francis Campbell Bayard, LL. M. p. 22-23. [Obituary.]

G. J. Extremes of rainfall over the British Isles. p. 18-20.

Heavy rainfall in the Cameroons. p. 16-17.

Mr. Charles Harding. p. 22. [Obituary.]

Professor Alfred de Quervain. p. 21. [Obituary.]

Meteorologische Zeitschrift. Braunschweig. Band 44. Januar. 1927.

Fontseré, E. Einfluss der Periodizität auf die Anomalien meteorologischer Mittelwerte. p. 28-29.

Gorczyński, Ladislaus. Über Solarimeter und einige andere thermoelektrische Instrumente für Sonnenstrahlungsmessungen. p. 5-12.

Kähler, K. Die elektrische Raumladung der Atmosphäre in Potsdam. p. 1-5.

Knoch, K. Der Begriff des "Rhythmus" in der Klimatologie. p. 25-26.

Letzmann, J. Silbercirren. p. 29-30.

Letzmann, J. Strahlige Kappen. p. 30-31.

Myrbach, O. Bemerkungen zu Köppen: "Brücken zwischen der Klimatologie und der synoptischen Meteorologie."

Zinke, Hans. Das Klima von Erfurt und seine Bedeutung für die Vegetationsverhältnisse, besonders für den Gartenbau. p. 18-22.

Reinecke, A. Neue Ballon-Theodolite. p. 31-34.

Rubinstein, Eugenie. Der jährliche Gang der Lufttemperatur und die Vegetationsperiode. p. 13-18.

Zinke, Hans. Das Klima von Erfurt und seine Bedeutung für die Vegetationsverhältnisse, besonders für den Gartenbau. p. 18-22.

- Nature. London.* v. 119. 1927.
 B[rooks], C. E. P. Planets and periodicities. p. 298. (Feb. 19.)
 Perrine, C. D. Progressive lightning. p. 278-279. (Feb. 19.)
 Vegard, L. Spectrographic observations of the second green line of the auroral spectrum. p. 349-350. (March 5.)
- Nature. Paris.* 1 mars 1927.
 La pluie de sang du 30 octobre 1926. p. 235.
- Nature magazine. Washington, D. C.* v. 9. March, 1927.
 Talman, Charles Fitzhugh. What price the ice storm? p. 147-151.
- Naturwissenschaften. Berlin.* 15. Jahrgang. 18. Februar 1927.
 Büttner, Konrad. Messungen der durchdringenden Strahlung. p. 158-160.
- New York Times magazine. New York.* March 13, 1927.
 Talman, C. F. Now the angry tornado vents its fury. p. 6; 16.
- Petermanns Mitteilungen. Gotha.* 73. Jahrgang. 1/2. Heft. 1927.
 Halbfass, Wilhelm. Südafrika als regenreiches Land. p. 32-33.
- Popular astronomy. Northfield. Minn.* v. 35. March, 1927.
 Coblenz, W. W. Temperature measurements on the planet Mars, 1926. p. 145-157.
- Revue générale des sciences. Paris.* 38. année. 1927.
 Metz. La propagation des ondes électromagnétiques. Application des idées actuelles sur la propagation à l'emploi des ondes courtes, à la météorologie, à la goniométrie. p. 5-14. (15 janvier); p. 39-47. (31 janvier.)
- Royal astronomical society of Canada. Journal. Toronto.* v. 21. 1927.
 Patterson, J. Solar activity and long-period weather changes. By H. H. Clayton. p. 38-41. (Jan.)
- Störmer, Carl. Preliminary report on crucial phenomena of polar lights. p. 66-71. (Feb.) [From Bulletin No. 6, International geodetic and geophysical union.]
- Royal meteorological society. Memoirs. London.* v. 1. no. 6.
 Bliss, E. W. British winters in relation to world weather.
- Royal meteorological society. Quarterly journal. London.* v. 53. January, 1927.
 Bliss, E. W. The Nile flood and world weather. p. 41-43. [Abstract and discussion.]
- Brooks, C. E. P. Non-linear relations with sunspots. p. 68-71.
- Royal meteorological society. Quarterly journal. London.* v. 53. January, 1927—Continued.
 Brunt, D. An investigation of periodicities in rainfall, pressure, and temperature at certain European stations. p. 1-30.
 Brunt, D. The period of simple vertical oscillations in the atmosphere. p. 30-32.
 Dines, L. H. G. Plotting isopleths of relative humidity. p. 43-44.
 Fujiwhara, S. Cloud studies. p. 33-39. [Describes great cumulus formed over fire at Tokyo after earthquake of Sept., 1923.]
 Glasspoole, J. The daily fall of rain over the British Isles. p. 65-67.
 Hergesell, H. The development of aerology. A retrospect and a glance into the future. p. 73-80. [Trans. from Meteorologische Zeitschrift.]
 Johnson, N. K. Some meteorological observations made at sea. p. 59-64.
 Johnson, N. K., & Davies, E. L. Some measurements of temperatures near the surface in various kinds of soils. p. 45-59.
 Margary, Ivan D. The effects of weather on plant life. p. 83-86.
 Mill, Hugh Robert. Rain. p. 86-89.
 The soaring flight of birds. p. 32. [Soaring of stork observed during kite flight.]
 Whipple, F. J. W. A remarkable halo complex. p. 80-82.
Royal society of London. Proceedings. London. series A. v. 114. March, 1927.
 Barnes, Howard T. Some physical properties of icebergs and a method for their destruction. p. 161-168.
 Schonland, B. F. J. The electric fields of South African thunderstorms. p. 229-243.
Science. New York. v. 65. March 4, 1927.
 Douglass, A. E. Solar records in tree growth. p. 220-221.
Scientific monthly. New York. v. 24. March, 1927.
 Humphreys, W. J. The atmosphere: origin and composition. p. 214-219.
Washington academy of sciences. Journal. Baltimore, Md. v. 17. March 4, 1927.
 Mathes, F. E. Some examples of the cellular structure of ice. p. 126. [Abstract.]
- Weltall. Berlin.* 28. Jahrgang. Dezember 1926.
 Archenhold, F. S. Nordlichter und Sonnenflecke. p. 33-34.

SOLAR OBSERVATIONS

SOLAR AND SKY RADIATION MEASUREMENTS DURING FEBRUARY, 1927

By HERBERT H. KIMBALL, Solar Radiation Investigations

For a description of instruments and exposures and an account of the method of obtaining and reducing the measurements, the reader is referred to the REVIEW for January, 1924, 52:42, January, 1925, 53:29, and July, 1925, 53:318.

From Table 1 it is seen that solar radiation intensities averaged close to normal at Washington, D. C., and Lincoln, Nebr., and slightly below normal at Madison, Wis.

Table 2 shows a deficiency in the total solar radiation received on a horizontal surface from the sun and sky

at Washington and close to the normal amount at Madison and Lincoln. No record was obtained at Twin Falls during February, as the pyrheliometer was undergoing repairs. The altitude of the pyrheliometer at that station is reported by the official in charge to be about 1,200 meters instead of 1,300 as given in the January REVIEW.

No skylight-polarization observations were obtained at Madison, Wis., as the ground was covered with snow throughout the month. At Washington, measurements made on three days give a mean of 61 per cent with a maximum of 62 per cent on the 17th. These are close to average values for Washington in February.